

OVERMOLDED ELASTOMERIC DIAPHRAGM PUMP FOR
PRESSURIZATION IN INKJET PRINTING SYSTEMS

ABSTRACT OF THE DISCLOSURE

An overmolded diaphragm pump for applying pumping force to a fluid such as liquid ink for ink-jet printing. The pump structure includes a rigid substrate having at least one chamber opening, and an elastomeric diaphragm and sealing structure fabricated of an elastomeric material. This diaphragm and sealing structure is overmolded over a portion of the rigid substrate and includes at least one diaphragm portion extending over a corresponding chamber opening. A gland seal portion makes a seal between the elastomeric diaphragm and sealing structure and a mating part.